

ABSTRACT OF THE DISCLOSURE

A method and apparatus for removing minute particles from a surface of a sample are provided that prevent redeposition of the particles onto the surface. By combining thermophoresis with laser assisted particle removal (LAPR), the methods and apparatus remove minute particles (for example, micrometer and nanometer sizes) and assure that they will not redeposit.

1. A method for removing minute particles from a surface of a sample, comprising:
a. providing a laser beam;
b. providing a thermophoretic field;
c. directing the laser beam at the surface of the sample;
d. directing the thermophoretic field at the surface of the sample;
e. removing the minute particles from the surface of the sample;
f. preventing the minute particles from redepositing onto the surface of the sample.